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Fitting psychotherapy to patient coping style: A meta-analysis

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Abstract

Over the course of 60 years of research, several personality traits have emerged as potential predictors of differential change in psychotherapy. Among them is the patient's coping style (CS), commonly distinguished between those who deal with change by looking inwardly (internalization) and those who deal with it outwardly (externalization). This study provides definitions of CSs, clinical examples, and frequent measures. We update a 2011 meta-analytic review that revealed a consistent interaction between CSs and treatment focus-symptom focus versus insight focus. The current meta-analysis of 18 studies revealed a medium to large effect (d = 0.60) and suggested that a symptom focus proves more effective for externalizing patient whereas an insight focus is generally more effective for internalizers. The article concludes with limitations of the research, diversity considerations, and therapeutic practices based on the meta-analytic results.

KEYWORDS

coping style, externalization, internalization, psychotherapy outcome, treatment adaptations

1 | INTRODUCTION

For decades, psychotherapists have tried to identify and conceptualize CSs and their relation to the treatment of those with psychopathology. In more recent years, there has been a concerted effort to reduce the multitude of CSs to a small set of essential constructs using various statistical methods. From Eysenck (1947) to Costa and McCrae (1985) researchers grouped the multiple styles into two clusters such as extraversion and introversion. In clinical literature, the terms, *internalization* and *externalization*, occupy a broader and more trait-like perspective from which to understand these variations of CS than do introversion and extraversion. They are distributed relatively normally in the population, but when combined with moderate to high levels of impairment, they produce recognizable pathological patterns. *Externalizers* are recognizable clinically because they avoid and act out when stressed or when they face change, and they tend to blame their unhappiness and failure on the environment or others. In contrast, *internalizers* tend to face change and threat by the adoption of an inner-blaming "neurotic" style of coping (Costa & McCrae, 1985). The typical descriptions of these two CSs include descriptors such as inhibited versus expressive, low versus high arousability, and socially reclusive versus gregarious.

Our understanding of how CSs evolve and manifest has been advanced by Kagan (1998), a developmental psychologist who observed the behavior of infants and children over long periods of time. Kagan determined that even shortly after birth, two prominent patterns of temperament distinguished themselves. One group of infants was highly anxious and socially avoidant; they ultimately tended to develop anxious, obsessive, and repetitious CSs as ways of controlling themselves in environments that they found to be overwhelming. They became intolerant of intrusions into their space and time and withdrew from intimate contact. The second group of infants was notable for their lack of reactivity to internal states and, paradoxically, by their strong needs for external stimulation that they addressed in a demanding and often aggressive way. Though actively seeking stimulation, these children, especially as they approached adolescence began taking direct action to cope, change, avoid, and escape threatening environments in which they found themselves.

In modern nomenclature, these two types of individuals are called internalizers and externalizers, respectively. Internalizers are worriers. They are persistently anxious and afraid and often become quite introverted and socially isolated. They are self-critical and depressive. In contrast, externalizers are recognizable by their impact on their social environment. They confront others, impose force on things that obstruct their progress, and otherwise act out.

In what follows, we focus on CSs of externalizing and internalizing. We begin by providing definitions of the relevant constructs, reviewing their common measures, and furnishing a clinical example. We then will briefly summarize the findings of our 2011 meta-analysis (Beutler, Harwood, Kimpara, Verdirame, & Blau, 2011), which examined the interaction of patient CSs with treatment type on therapy outcome. Specifically, the meta-analysis tested whether patients with an externalizing CS responded best to a symptom-oriented treatment, whereas patients with an internalizing CS respond best to an insight-oriented treatment. We then report the methodology and results of an expanded meta-analysis; indeed, our aim is to confirm the role of CS in choosing the effective treatment that was suggested in the 2011 review. The article will conclude with research limitations, diversity considerations, and recommended therapeutic practices.

2 | DEFINITIONS AND MEASURES

2.1 | Definitions

CS denotes an enduring personality trait that predisposes people to deal differentially with anticipated or experienced change. It is a characteristic way of behaving to reduce discomfort and to adapt to a changing environment that is outside of one's control (Beutler & Moos, 2003). It is not a term that uniformly connotes psychopathology because emotionally healthy individuals have CSs and most even have a preferred CS. However, if this CS becomes extremely exaggerated, variable, or rigid, it can be pathological.

Generally, the many theories that constitute psychotherapy can be bifurcated into those that propose that insight relieves symptoms and those that seek directly to change the same symptoms. *Insight approaches* emphasize a degree of re-experiencing certain emotions that have been repressed, suppressed, or diverted in the course of avoiding emotional pain. This description encompasses those theories designed to achieve self-understanding and

to open one's hidden and often guilty experiences to one's self and others, with the assurance and hope that these experiences will change if one understands why they exist.

Alternatively, symptom change approaches take a view that one changes best by intensely engaging in a systematic process of enacting new behaviors and acquiring new perceptions, followed by social reward/ reinforcement. New learning occurs if it is rewarded; old habits are abandoned if they fail to generate reinforcement. Sometimes, the reward that changes behavior is derived directly from engaging in a relationship which provides a new experience of acceptance and personal value; other times not. At those latter times, change occurs by determining what the reinforcement is for unwanted behavior and eliminating it.

In this study, we emphasize that the effectiveness of these two, broad classes of psychotherapies—insight oriented and symptom focused—is greatest when they are compatible with the patient's CS. Psychotherapists can determine whether a particular patient's CS call for a direct attack on symptoms or whether it calls for procedures that promote insight and awareness. Unfortunately, most therapists use either an insight-oriented or a symptom-focused approach, ignoring the fact that the efficacy of the therapy choice ideally depends on the CS of the patient. In contrast, various therapists who espouse an integrative perspective (e.g., Beutler, Clarkin, & Bongar, 2000; Consoli, Beutler, & Bongar, 2018; Norcross, 2011) encourage therapists to learn to respond differentially when patients of these two types are identified.

2.2 | Categorical versus continuous measures

Accurate measurement is the key to understanding the interactive roles of externalized and internalized CSs and therapist insight versus symptom focus. In our discussion so far, we have presented CSs and therapy foci as categories or discrete classes. However, in clinical reality and in many measurements, therapy focus and CS exist as a matter of degree. A therapist is more or less symptom focused, a patient is more or less externalized, and everyone has some of both externalizing and internalizing tendencies.

Alas, there are times when categorical measurement is all that is possible. When that is the case, it behooves the investigator to remember that using categories probably understates the strength of the treatment by patient interactions under study. Measurement is more accurate and research results generally less variable when continuous scores are used.

Another consideration when selecting ways to measure CSs and treatment focus is the directness of the measures. The scores obtained from "direct" measures are not filtered through a theoretical lens or another person's belief system. They either can be the observations of the patient, the therapist, or an external observer, but all observers can agree about their identity and magnitude. A direct measure asks the person involved a question and the answer is assigned a value. The score obtained is a compilation of those responses. The responses of a patient to a structured set of questions, for example, are direct even if some of those questions ask for "opinions."

2.3 | Measures of CSs

Several direct measures assess patient CSs. Individuals' CSs can be extracted from omnibus personality measures, such as the Minnesota Multiphasic Personality Inventory (MMPI and the revised MMPI-2; Butcher, Beutler, Harwood, & Blau, 2011) and the NEO inventories (MacCrae, Harwood & Kelly, 2011).

The MMPI (Butcher, 1990) is probably the most widely used measure of patient CSs. CS is not included as one of the regular or content MMPI scales but validated algorithms can extract CSs by combining relevant scales. Several studies included in our meta-analysis used a version of the MMPI internalization ratio formula. Scores on four externalizing scales (Hy, Pd, Pa, and Ma) and four internalizing scales (Hs, D, Pt, and Si) were used to compute a ratio that indicates the relative strength of these two CSs.

A second direct measure is also occasionally used to code patient CS. The NEO-PI-R (Costa & McCrae, 1985) is the original measure of the "big five" personality dimensions: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. CS can be extracted from the NEO-PI by combining scales of Extraversion, Neuroticism, and Openness in various combinations (MacCrae et al., 2011). The neuroticism subscale is relatively complex, combining aspects of anxiety and introversion, and is similar to what we have identified as internalization. Extraversion is also similar to the concept of externalization, and is less statistically complex than introversion.

A direct assessment of internalizing and externalizing CSs is afforded by the STS/Innerlife (Beutler, Williams, & Norcross, 2009), an instrument administered and scored via the internet. The STS/Innerlife comprises 171 questions and assesses 22 problems domains as well as externalizing and internalizing CSs. It has demonstrated moderate-high internal-consistency for all the scales across cultures. The internalizing scale comprises items like, "I avoid meeting people or being around certain people because doing so makes me so upset or angry"; "I can't seem to say the things that go through my mind." Contrasting items capture externalizing patterns (e.g., "I frequently seek out very exciting activities, like bungee jumping, parachuting, racing, gambling, etc."; "I have gotten into trouble quite often because of my behavior"). The two STS/Innerlife scales representing externalizing and internalizing personality qualities are continuous, self-report measures. A ratio of these two CS indices can reflect the dominance of one or the other (Harwood, Beutler, Williams, & Stegman, 2011).

As already mentioned, indirect measures of CS are frequently used in psychotherapy research. This usually involves the assignment of a group-designated trait to all patients who share a particular diagnosis, as opposed to measuring each individual patient's style. For example, patients with conditions such as bulimia, antisocial personality, compulsive disorder, substance abuse disorder, and hypomania may be treated as externalizers, while patients with conditions like unipolar depression, generalized anxiety disorder, obsessive disorder, avoidant personality disorder, and social anxiety may be treated as internalizers.

2.4 | Measures of therapy focus

The most frequently used direct measures of treatment focus are of a psychotherapist's in-therapy behavior or theoretical orientation. For example, the Therapist Process Rating Scale (TPRS; Malak et al., 2003) is a research instrument that can rate in-session behaviors to identify therapeutic styles and treatment focus. Compliance with treatment methods for increasing insight and reducing symptoms can be directly rated from therapist video or audio samples of therapy sessions (e.g., Holt et al., 2015).

The clinician's activity ratings can be obtained on therapy as it is normally applied in a naturalistic design (e.g., Kadden et al., 1989), but such a procedure is confounded by numerous other factors that influence what and how the therapist delivers the treatment. A more reliable procedure is to train participating therapists to be consistent in delivering a preferred approach (e.g., Barber & Muenz, 1996; Beutler, et al., 2003; Poulsen et al., 2014).

Unfortunately, random assignment of patients to a particular treatment focus is often not possible. Most randomized controlled trials (RCT) incorporate categorical designations of treatment (e.g., cognitive behavioral therapy, psychodynamic, experiential) and patients (e.g., depressed, anxious, psychotic). Embedded in these group designations may be those with both internalizing and externalizing qualities. Research of this type rarely looks at individual differences among patients or therapists within classes, unless through a post hoc analysis, and this is rare as well. As an unfortunate result, patient predictors are confined to diagnostic criteria and therapy predictors are confined to categorical differences among brand names of therapies. Individual differences among therapists' applications of theories as well as individual patient differences within diagnostic groups are ignored, increasing error variance.

Fortunately, RCT data often can be nudged to address the optimizing role of "fit" between CS and therapy focus by using categorical, indirect measures. Thus, the same group designations are applied to all individuals, with the probable loss of specificity and sensitivity. The measurement is indirect because the resulting classifications of patient CSs and treatment foci are not derived from the individuals themselves but from a group generalization.

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The magnitude of psychotherapy effect using an indirect measure is usually smaller than when the same constructs are directly measured (Beutler et al., 2011).

When indirect measures are required, researchers assign a treatment focus to the entire group of psychotherapists sharing the same theoretical orientation or following the same treatment manual. For example, if a therapist is identified as psychodynamic, that person may be inferred to be vitally interested in the patient's unconscious experience and with the role of insight in a patient's recovery. Alternatively, a cognitive therapist is typically inferred to be interested in stimulating symptom change. In either case, the group label is an insensitive estimate of in-session treatment focus.

3 | CLINICAL EXAMPLE

Mr. S is a 42-year-old, married Vietnamese-American man who immigrated to the United States from Vietnam 17 years ago, where he had worked as a science teacher. By his report, since immigrating, he has not made any close friends, has lost much of his social identity, and has been isolated from others, including his extended family. Mr. S lives with his wife and his two children (ages 12 and 15) in a modest house near his work, a Vietnamese grocery shop.

Mr. S was referred to the outpatient clinic by his wife for treatment of his gambling addiction. His wife reports that Mr. S often isolates himself in his room or escapes to a casino, where he prefers odds-based games, such as the slot machine, over skill-based games (e.g., black jack and poker). When his wife has asked him why he only plays the slot machine, Mr. S responded that the slot machine had "become his close friend who can trust and satisfy his need for enjoyment." Mr. S had secretly accumulated \$3,000 debt on his credit card.

His wife discovered his credit card debt, at which point she called a psychologist, Dr. K., who had worked with gambling addictions and who ran the training clinic at a local university. Dr. K. explained that he would arrange treatment with a PhD student therapist and would supervise the treatment personally.

The patient and his wife arrived on time for the appointment with the psychology trainee (Ms. J). While beginning to establish a therapeutic relationship and gathering a social history, Ms J. gathered information about Mr. S's support system and debt. The therapist confirmed Mr. S's report that he was several thousand dollars in debt, that he does not play skill-based games, and that he avoids goal-oriented, outgoing, competitive, and social activities. Both his behavior and the test results indicated a socially isolated and emotionally restricted pattern. The patient indicated that he does not like his current lifestyle, but he felt hopeless to change it. He reported some suicidal thoughts but no intention or activity.

When asked about his home and work environment, Mr. S acknowledged conflicts with his wife and coworkers, to which his typical pattern was to engage in vocal outbursts for a short time and then to withdraw and escape. He did not speak out about these difficulties, but rather isolated himself to avoid further confrontation. He also became self-blaming and felt guilty.

Mr. S is an internalizing individual who uses gambling as an escape from familial threats and as a confirmation of his own lack of self-worth. Concomitantly, he scored high, within the clinical range, on the STS/Innerlife internalizing scale. Externalization was also evident, but barely in the clinical range. Mr. S was considered a selfdebasing internalizer with some defensive externalizing impulses.

Mr. S's depression and anxiety scales were also in the clinical range on intake. Predictably, he also scored high on scales indicating family disturbance, obsessive-compulsive behaviors, and social avoidance. He acknowledged all of these symptoms and indicated that, when he has become depressed or anxious, he begins to fear his own destructive urges and withdraws from others to avoid their blame. Subsequently, he feels like no one loves or wants to be around him.

The treatment plan was to focus on his recurrent depression and self-blame first, as an initial step and motivator of his compulsive gambling. Time-Limited Dynamic Psychotherapy (Strupp & Binder, 1984) was used

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because of its interpersonal focus and its emphasis on vicious cyclical patterns. This represents a match between Mr. S's internalized CS and an insight-oriented psychotherapy.

The plan was to link the patient's depression and self-loathing to its historical roots in his family and to treat his gambling as both an expression of anger and a confirmation of his low self-worth. The therapist initially encouraged the patient to look at the longstanding and maladaptive patterns in his family relationships and extended these to the self-destructive similarities in his gambling. The therapist analyzed the patient's core conflictual relationship theme (CCRT), framed in terms of his wish (his thought), expectations from others, actual response from others, and introject.

The patient gradually came to understand that his CS was related to his father's tendency to discount and reject him. As a child, Mr. S was constantly blamed for displeasing his father and stimulating his father's anger. Early on, he initially tried to fight back, an approach that was quickly smashed. Then he emotionally hid as a way of pacifying his father, a behavior that included blaming himself as an appeasement. His anger at his father precipitated his own sense of shame, self-loathing, and doubt. This shame, in turn, and fomented an introject of his being guilty for all family problems.

The therapist's work centered on understanding the patient's relationship with his father and his wife, his efforts to protect himself and them, and the self-punitive results of gambling. The therapy emphasized insight and its ability to generate behavior change. The therapist encouraged self-monitoring of his CCRT so he could both see how "angry" behaviors, such as gambling and withdrawal, routinely followed a rejection or criticism and how they were accompanied by an introjected self-loathing.

A turning point for the patient occurred when he realized that he had reconstructed his family in the therapy room. Ms J. played the role of his mother, who was both rejecting and rescuing when conflicts emerged with his father. Dr. K. assumed the role of the patient's father, remote and removed but in control of all that happened behind the scenes; it was he from whom the patient sought escape. Soon the patient came to see his losing streak(s) in gambling as an expression of rebellion that arose from an overwhelming sense that he was indebted to his father, who tolerated him but never acknowledged his suffering.

Several months into his treatment, Mr. S visited his widowed mother and talked about his father. He discovered that his father had been abusive to his mother and was a closet alcoholic. Mr. S also recognized the punishing role that his gambling often played. Thereafter, his gambling became less and less frequent.

Nonetheless, these changes were followed by a period of distress and depression. But, the initial disappointment he experienced in his father was followed by his gradual realization that his father was much like him, but Mr. S had made a better life than had his father. He felt vindicated and finally, even proud that he had been "a better person" than his father. When he ended therapy after 25 sessions, Mr. S was no longer gambling or hiding in a remote part of the house. He asked that Dr. K. join Ms. J and him for the final session. Here he confronted Dr. K. with being the Oz behind the curtain. When Dr. K. gave him a goodbye hug, he felt relief and pride.

In this case, Mr. S responded well to an insight-focused psychotherapy that fit his internalizing CS. Although mental health professionals would have been understandably tempted to treat his gambling more directly with a symptom-focused therapy, this clinical example and the research evidence favor adapting the treatment to his transdiagnostic personality features, including CS, for maximum results.

4 | META-ANALYTIC REVIEW

4.1 | Previous meta-analysis

To our knowledge, the only previous meta-analysis on CS in psychotherapy was our 2011 meta-analysis (Beutler et al., 2011). The purpose of that analysis was to identify research studies that provided data on the interaction

between client CS (internalizing and externalizing) and psychotherapy type (insight oriented vs. symptom focused). To be included in the earlier meta-analysis, a study had to meet four or more of six criteria:

- 1) Inclusion of one or more reliably applied therapeutic treatments by trained psychotherapists to represent meaningful variations among the treatments.
- 2) Inclusion of patients who were at least moderately impaired to represent client variability among CSs.
- **3)** Clearly defined treatments and distinct patient "matching" characteristics that permitted the derivation of fit between patient CSs and treatment focus.
- 4) Used random assignment of clients to treatment and a diverse body of therapists to provide contrasting responses by clients to insight/awareness and symptom-focused treatments.
- 5) Confirmation of the reliability of treatment and CS measures.
- 6) Included outcome measures that permitted an analysis of outcomes as a function of the fit between client CS and therapy focus.

In the 2011 analysis, a dozen studies met at least four of the six criteria and the ensuing meta-analysis found a weighted mean effect size of d = 0.55 (p < 0.05; CI 95% = 0.44–0.76) for the interaction between patient CS and therapy focus (Beutler, et al., 2011). Specifically, there was a clear pattern in which externalizing patients did best with symptom-focused psychotherapies and internalizing patients did best with insight-oriented psychotherapies. The match of CS and therapist focus accounted for 20% of the overall variance in patient improvement.

The type of measurement for treatment focus proved critical. Assessment of therapy insight and symptomatic focus overwhelmingly relied on therapy brand name designations (indirect) rather than direct observations of therapist in-session behavior. Although direct measures were infrequent, their mean effect sizes were higher than those obtained using these categorical and indirect indices (n = 9; ds = 0.73 vs. 0.44). Thus, the overall effect size in the meta-analysis was probably an underestimate of the actual strength of the fit between patient CS and treatment focus.

4.2 | Literature search

We began our literature review for the updated meta-analysis with the 12 studies that were included in the 2011 meta-analysis. To extend the number of studies, we conducted broadband searches, first using terms such as "coping style," "personality," "introversion" and "extraversion," and the like to identify the studies via PsycINFO and widely cited journals. We also searched for references to patient samples that carried diagnoses that were indicative of internalizing and externalizing disorders.

We searched the years 1990–2018. Figure 1 presents a preferred reporting items for systematic reviews and meta-analyses (PRISMA) flow diagram. The search terms "psychotherapy outcome" and "randomized control trial" resulted in a pool of 756 studies. Then, we selectively entered key diagnostic terms that were used in the 2011 analysis to indicate internalizing and externalizing disorders.

As potential studies emerged from these searches, we examined them using the same six inclusion criteria used in the 2011 meta-analysis. We identified 11 new studies not included in the 2011 analysis that served as candidates for inclusion in this meta-analysis. We examined each of these studies to ensure the presence of actual therapy and clinical populations. Two studies were dropped from further analysis on this basis. Three more studies were dropped because of insufficient data to calculate effect sizes.

The final sample of our current meta-analysis consisted of 18 studies, 12 from the 2011 review and 6 from the literature search described here (see Figure 1). Among the 18 studies, there was a total of 1,947 patients and 57 different treatments on which effect sizes were computed.





4.3 | The studies

The 18 studies in the meta-analysis are summarized in Table 1. Eight of the 18 studies used direct measures to assess client CS, and nine studies used indirect measures. The two remaining studies included both direct and

References	Total N	Design	Type of measure (treatment focus)	Coping style of patients	Tx included	ES focus	ES coping	ES fit (d)	ES fit (r)	V fit
Beutler, Engle, et al. (1991)	63	RCT	I (FEP/Ins vs. SSD/Sym)	D (Int-Ext)	Both	1.63		0.75	0.35	0.076
Litt, Babor, et al. (1992)	79	RCT	I (CST/Sym vs. Interact/Ins)	D (Ext)	Sym			0.63	0.30	0.053
Beutler, Machado, Engle, and Mohr (1993)	46	RCT	I (CT/Sym FEP/Ins vs. SSD/Ins	D (Int-Ext)	Both	1.16		1.64	0.63	0.124
Longabaugh et al. (1994)	140	RCT	I (CBT/Sym vs. ECBT/Ins)	l (Ext)	Sym	0.12	0.68	0.37	0.18	0.091
Barber and Muenz (1996)	84	RCT/MR	I (CBT/Sym vs. IPT/Ins)	l (Ext-Int)	Both	0.18		0.18	0.09	0.048
Calvert, Beutler, and Crago (1988)	108	MR/Q-E	D (TOQ) (Sym vs. Interact)	D (Int-Ext)	Both			0.81	0.38	0.003
Kadden et al. (1989)	96	Nat	I (CBT/Sym vs. IPT/Ins)	D (Ext)	Both			0.6	0.29	0.002
Karno, Beutler, and Harwood (2002)	47	RCT	I (CT/Sym vs. FST/Ins)	l (Ext)	Both	0.02	0.3	0.5	0.24	0.91
Wilson et al. (2002)	154	RCT	D (CBT vs. IPT)	l (Ext)	Both		0.13	0.13^{+}	0.06	0.14
Beutler, Moleiro, et al. (2003)	40	RCT/MR	I (CT/Sym vs. NT/Ins, PT)	D/I (Int-Ext)	Both	1.01	0.99	0.71	0.33	0.12
Milrod et al. (2007)	49	RCT	I (PFP/Ins vs. ART/Sym)	l (Int)	Both	0.92		0.71	0.33	0.087
Knekt, Lindfors, et al. (2008)	326	RCT	l (SFT/Sym vs. STD/Ins & LTD/Ins)	D (Int)	Both	0.94	0.94	0.17	0.08	0.015
Kimpara (in Beutler, 2009)	121	Nat	D (SFT/Ins vs. Sym)	D (Int)	lns	1.17		0.76	0.36	0.002
Johannsen (as described by Beutler, 2009)	92	Q-E/MR	D (TPRS/Ins vs. Sym)	D (Int-Ext)	Both			0.61	0.29	0.045
Leichsenring et al. (2009)	57	RCT	I (CBT/Sym vs. STD/Ins)	l (Ext)	Both	0.13	0.57	0.57 ⁺	0.28	0.16
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TABLE 1 Results of effects of coping style and treatment focus

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References		Total N	Design	Type of measure (tre. focus)	atment	Coping style of patients	Tx include	d ES focus	ES coping	ES fit (d)	ES fit (r)	V fit
Stangier et al	(2011)	117	RCT	I (CBT/Sym vs. IPT/In	s)	l (Ext)	Both	0.44	0.43	0.43	0.21	0.07
Beutler, Forre	ester, et al. (2012)	258	RCT/MR	I (CT/Sym vs. Psychoc ES/Ins	dynamic,	D/I (Ext-Int)	Both	0.11	0.15	0.13	0.06	0.004
Poulsen et al.	(2014)	70	RCT	I (PAT/Ins vs. CBT/Sy	m)	l (Ext)	Both		1.53	1.53	0.6	0.12
Total N	Mean/Weighted Avg Focus ES:	20	lean/ Weigh oping ES:	ited Avg Mean Effect	n Fit ES (Rau ts Model):	mobr	CI (9	5%)	σ			
1,947	0.60	Ó	66	09:0		0.2	29 0.44	0.76	<0.06	01		
				Q: 1	15.84							
ote. ART: appli 5: experiential	ied relaxation; CBT: cog systems; FST: family sy	nitive beha stem; Inte	avioral therag	py; CT: Cognitive thera tive; IPT: interpersonal	apy; CST: co; I therapy; LT	gnitive skills train D: long term dyr	ing; ECBT: relat amic therapy; N	ionship enha IT: narrative	inced CBT; EF therapy; PAT	T: focused : psychoar	expressive 1 alytic thera	therap by; PF

<u>نہ ج</u> panic focused psychodynamic; PT: prescriptive therapy; STD: short-term dynamic therapy; STF: solution focused therapy; SSD: supportive self-directed therapy. ž

Measure Tx Focus = Either Direct (designated as D) or Indirect (designated as I). Indirect measures are based on the treatment model used and identified as either Symptom (Sym) or Insight (Ins) focused: Direct measures are based on an individual measure of the use of insight or symptom change procedures. Direct measures include: TOQ (therapist Orientation Questionnaire), TPRS (Therapist Procedure Rating Scale). Indirect measures of Tx Focus are based on the model of treatment studied. Design RCT (randomized control trial) MR (multiple regression) NAT (naturalistic study), Q-E (quasi-experiment)

Coping Style (CS) is measured either directly (designated as D) or indirectly (designed as I). Direct measures are an individual personality test; indirect measures are derived from the diagnosis.

expressed as d with the exception of r. M r = the Mean effect size as correlation between treatment and total means combining all treatments. M V fit = The mean differences between M ES (Focus) = The Mean Effect size attributable to the Treatment Focus Variable combining all treatments. M ES (Coping) = The Mean Effect size attributable to the Coping Style Variable combining all treatments. M ES Fit = The mean difference between Effect Sizes for "good" and "poor" fit, estimated in MR/Nat studies from correlational data. All ESs are treatment and total variances for "good" and "poor" fit.

An interaction effect for coping style and treatment on outcome was not available. Resulting score of fit was the result of difference of poor match from good match of treatment based on coping style.

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indirect measurements of CS. The two measures resulted in identical nominal classification, and this classification was used for the analyses. Fourteen of the 18 studies were RCT that tested the relative effects of two therapies that were classified by "focus" for our analysis. Fourteen studies (74%) were conducted in the United States, three (16%) were conducted in Germany, one (5%) was completed in China, one (5%) was carried out in Finland, and one (5%) was conducted in both the United States and England.

4.4 | Coding studies

We coded each study with respect to four variables (outcome, CSs, interaction effects, and therapy foci, See Table 1). Outcome was defined by the outcome measures used by the authors of each study. To allow comparison among studies, outcome in each study was converted to a standard score (Cohen's *d*). Only 12 of the studies provided outcome data on the role of therapy focus (Table 1; Column 7) and only nine studies provided data on patient CS (Table 1; Column 8). All 57 treatments contained in these studies, however, were coded as either symptom or insight focused, using three trained and independent raters.

4.4.1 | Outcome effect sizes

We confined the analyses to outcomes that were measured at the end of treatment. The outcome score was the mean *d* difference for all of the treatments categorized as symptom-focused and, separately, for those categorized as insight-focused (11 studies, Column 4). In the case of treatments with multiple outcome measures, we followed the suggestions of Borenstein et al. (2009, p. 234) and calculated the mean standardized (*d*) score difference for each comparison. Then we pooled (averaged) the difference scores across multiple outcome measures in a study to reach a single score indicating pre-post differences for each insight and symptom focused treatment.

4.4.2 | Treatment focus

Among the 14 studies that used indirect measures to assess therapy focus, names and descriptions of the therapies were used to classify them as either insight or symptom focused The procedure to classify each therapy used the three raters as described previously. The four remaining studies utilized direct measures of the degree to which individual therapists used insight and symptom focused interventions, respectively.

4.4.3 | Coping style

Seven studies utilized a mixed inpatient or outpatient sample that could be reliably divided into internalizing and externalizing subsamples using either direct or indirect measures (see Table 1; Column 8). Five of these studies utilized a direct measure of patient CS, whereas the remaining two studies used diagnosis as an indirect measure of CS and then compared patients with internalizing and externalizing diagnoses.

Nine studies used diagnostically homogeneous samples, without additional assessment, that precluded them from being divided reliably into internalizing and externalizing groups. In these cases, the raters made a final classification (see Table 1). Hence, all patients within each study were assigned to an internalizing or externalizing category based on patient diagnosis. Five of these studies focused on externalizing patterns, primarily substance abuse. Four of the studies treated internalizing individuals with mixed symptoms (e.g., social phobia, unipolar depression, and obsessive thoughts).

Because these nine studies were each conducted on only a single group of patients and in some cases, with only a variation of a single treatment (e.g., Kimpara et al., 2009), a complete test of CS effects could not be conducted. In these cases, an effect size (*d*) was calculated for each treatment on a single group of patients, and we distinguished between those who had a "good fit" with treatment focus and those who experienced a "poor fit."

Only six studies included subsamples of both internalizing and externalizing CSs as well as treatments with two treatment foci. All of these studies used a direct measure of CS, but not all used a direct measure of therapy focus. For these studies, we conducted a complete 2×2 comparison that included assessment of interaction effects.

4.4.4 | Interaction effects

Interaction effects were calculated as the weighted product of CS and treatment focus in a standard meta-analysis. Unfortunately, only nine studies of the 18 reported both pre- and posttreatment test scores from which change could be assessed, and only seven studies reported main effects for both CS and therapy focus (see Table 1, Columns 7 & 8). Fortunately, however, all studies in our series contained either pre- and posttreatment changes or the information necessary to conduct regression analyses from which we extracted a change score (*d*) associated with each treatment.

The mean ES fit was expressed as a multiplicative combination of the effects of therapy focus and CS on d change scores. In this case, d change scores were also weighted for variance and sample size. Thus, in the primary analysis, we entered in the meta-analysis, mean d change scores for each treatment representing patient CS and treatment focus. The analysis also calculated an interaction term, shown in Column 9 of Table 1. This term is the weighted product of CS and therapy focus d change scores and is taken as the index of ES fit for each study.

5 | RESULTS

The main objective of this meta-analytic review was to study the interactive effect of patient CS and treatment focus on psychotherapy outcomes. In an ideal study of the interactions of CS (externalizers vs. internalizers) and treatment focus (insight vs. symptom), at least two levels of each variable would be included. However, only 11 of the 18 studies in the current analysis specifically evaluated the fit of treatment to the patient, and only four of these used a group comparison design (as opposed to a regression-based design). The remaining studies were primarily concerned with determining the efficacy of a particular psychotherapy and tested two treatments among a diagnostically homogeneous sample of patients. These latter studies and the regression designs frequently omitted reporting pretreatment scores on the dependent variable. This omission limited our statistical comparisons. To address this problem, we estimated the pre-post differences to capture a reliable interaction term from the analyses reported by the authors, but we could not consistently estimate an effect size (*d*) for each therapy focus or CS.

Data were analyzed with a random effects meta-analyses using Wilson's (2005) Statistical Program for the Social Sciences (SPSS) macros with supplementary multivariate analyses. The meta-analysis produced a mean CS x therapy focus interaction effect size (*d*) of .60 for all studies (SE = 0.10; p < 0.001; CI 95% = 0.44–0.76; Table 1). Such an effect size is considered to be medium to large (Cohen, 2008) and indicates that about 23% of the variance among outcomes was a result of the interaction. A univariate analysis on weighted scores proved to be significant as well (*F* [1,16] = 4.87; p < .05). This result supports the effect of patient x treatment matching or fit in optimizing outcomes; specifically, internalizing patients fare better in psychotherapy with insight-focused therapy and externalizing patients fare better in symptom-focused intervention.

5.1 | Evidence for causality

We consider two lines of evidence to conclude that the match or fit of CS and therapy focus causally leads to better treatment outcomes. First is the empirical evidence that the interaction of patient and treatment qualities are moderately related both to good and poorer clinical outcomes. The meta-analytic medium to large effect size of

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0.60 was based heavily on studies that used indirect measures of patient and therapy factors. The degree of fit, therefore, is likely understated.

The second line of evidence is embodied in that 14 of the 18 studies in the meta-analysis were RCTs in which patients were randomly assigned to treatments, and treatments were conducted independently of one another with many controls to limit the effect of extraneous variables. RCTs aim to prove a causative link between patient and treatment patterns, and the consistency of RCT findings in the form of interaction effects in this study are consistent with their being moderators of change.

In sum, the evidence suggests a causal chain but a final conclusion cannot be reliably reached. We look forward to additional and well-controlled, prospective studies to strengthen these conclusions.

6 | LIMITATIONS OF THE RESEARCH

There are several limitations to this meta-analysis. First, the number of studies in the meta-analysis is still relatively small. Second, most studies in the meta-analysis utilized indirect measures, such as diagnostic categories (e.g., depression, substance use), as proxies for client CSs. Psychotherapy brand names were also used as proxies for insight and symptom-centered foci. Ideally, each study would have included a direct, individual measure of CSs, such as MMPI-2 or STS/Innerlife, as well as direct observational measures to quantify treatment focus (Beutler & Forrester, 2014).

Another limitation is that three-quarters of these studies took place in North America. This leaves open the possibility that the findings are unique to the United States or to English speaking patients and therapists. While several studies in Asia and South America have pointed to the generalizability of the findings, unfortunately, only one of these studies included a direct assessment of treatment factors in optimizing outcomes (Johannsen as cited by Beutler, 2009). These meta-analytic results require further research, both in the US and in other cultures or countries using large sample sizes with direct measures of CSs and treatment focus. We will consider several of these limitations as we consider diversity issues broadly.

7 | DIVERSITY CONSIDERATIONS

Differences in nonwestern and even non-English speaking western cultures might limit the generalizability of these meta-analytic results. Cross-cultural matching research has been sparse and, when conducted, has rarely included culturally diverse US samples. Cultural contexts have a great impact on how a client interacts with the world and with psychotherapy (e.g., Beutler, 2009; Norcross, 2011; Sue, 2002). If countries have values and traditions far removed from western cultures, generalization of US findings to these countries may prove difficult.

CSs may not mean the same thing abroad as they do in the US For example, in many Eastern cultures, attribution styles are more likely to include self-blame (internalizing CS) than in western cultures (e.g., Kim, 2002; Kitayama, Mesquita, & Karasawa, 2006); people in eastern societies have historically tended to blame themselves for mistakes and accord successes to others at a much higher rate than in the US.

Recent research on the distribution of CS scores suggest that some eastern cultures, such as the Japanese, Taiwan, Mainland China, and Korean, are beginning to adopt both Western and Eastern values. As this transition proceeds, the meta-analytic results and their clinical implications may become more easily generalized to Eastern cultures.

What can be said from the available research is that, at least among Spanish speakers in Argentina and Spain, CS can be translated without losing reliability (Corbella et al., 2003). In Argentina and Switzerland, matching patterns parallel what has been found among US participants (Beutler, 2009; Beutler, Mohr, Grawe, Engle, & MacDonald, 1991). In these countries, patient CS seems to follow the same interactive parameters as is true in the

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United States (Corbella et al., 2003). It has also been found that the patterns of influence apply to men and women, but insufficient research has been conducted on clients of diverse sexual orientations, religious commitments, and other intersecting dimensions of culture. Psychotherapy fit must consider individual differences in CSs within multiple cultures.

8 | THERAPEUTIC PRACTICES

A client's CS can guide therapists in applying treatments that produce optimal psychotherapeutic outcomes. Below we offer suggestions for therapeutic practice arising from the meta-analytic research on CSs.

- Assess patients' CSs in reviewing their life history and conducting intake assessments.
- Develop a conceptual understanding of clients' CS in stressful or aversive situations.
- Use symptom-focused treatments, such as behavioral or cognitive behavioral psychotherapies, with externalizing
 patients.
- Use insight or relationship-oriented psychotherapies with internalizing patients.
- Develop competency in both symptom- and insight-focused treatments to optimally match the needs of more clients.
- Be aware of client preferences and other transdiagnostic factors that can effectively guide treatment selection.
- Tailor treatment to a given client following research leads.

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